things which in the commercial world would not be tolerated for a single day. Some colleges have a much greater proportion of this kind of students, but all colleges have far too many. It is certainly not logical to say that the work of the colleges is so admirable in some respects that the undesirable should be overlooked.

The colleges continually appeal to the public for money and for students. Then why is not this public entitled to consider all phases of college administration and college work? It is considered wise to examine all sides to other questions, and to give the proper relative weight to all things involved. Why should the college question demand a special kind of treatment? Whether instructors and students accomplish as much as they might with the facilities available and with the funds expended is not by any means unimportant. Unless we can claim exemption from any form of criticism, we have no grounds for objection to criticism here.

However true it may be that other things connected with the work of the colleges are more important than those discussed in the Cooke report, no convincing reasons have been given, nor can be given, to show that the bad in our college system can not be improved without the least detriment to the good. In fact to improve in one line must naturally tend to improve others also. To waste time and money will not help any student to become a great scientist or a good citizen. A long, tedious and expensive investigation is more likely to bear fruit in the hands of one who has some idea of the value of his own time and the other things he employs. The dilettante in science hinders its progress more than he helps.

I can not see how improvement in the business management of our colleges or improvement in the quality of our student body by sending home those who will not do a reasonable amount of work, or improvement in other lines that might be mentioned, can in the least do other than "tend to assist those conducting these institutions and their students towards the attainment of their own highest ideals in scholarship, character development and culture."

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February 21, 1911

LABORATORY TABLE TOPS

TO THE EDITOR OF SCIENCE: In SCIENCE for February 17, 1911, I notice a short discussion of suitable material for laboratory table tops. Having just found something quite satisfactory, which, so far as I know, is new, the mention of it may be of interest.

The table I have recently tried has a hexagonal top approximately six feet in diameter. The substratum is of pine seven eighths thick and of pieces cross-joined. This substratum is overlaid with a three eighths cover of "asbestolith," a composition of asbestos and cement. This cover of asbestolith was infiltrated with paraffin. To hold the cover the substratum was partially bored to supply small holes which were filled with the asbestolith. This asbestolith is laid on like cement and hardens. It can be made to cover the edge of the top so that the top has the appearance of a solid slab. This top has an absolutely continuous surface, a high degree of resilience, is acid and alkali proof, and can be repaired at any time to original form. The only effect of heat is to melt the paraffin, but this has not proved a serious objection, as it can always be rubbed down to look well. The work was done for me by the Waco Cement Company, but no doubt can be duplicated almost anywhere.

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TOTEMISM

IN SCIENCE for February 17 there appeared a report of a paper on "The Totemic Complex" read by myself at a meeting of the Anthropological Society of Washington, on January 17, 1911. I wish to correct some statements made in that report, which might prove misleading. The beginning of the study of totemism does not date back to the sixteenth but to the later half of the nineteenth century. The various features of totemism (exogamy,

tabu, animal descent, etc.), although "they exist separately and independently from one another," are also found associated in totemic complexes. If they were "nowhere found united" and were "not correlated to one another," there would be no totemic problem.

A. A. GOLDENWEISER

February 23, 1911

EVIDENCE OF THE ZEBRA IN THE PLEISTOCENE FAUNA OF FRANCE

FROM certain drawings by paleolithic artists, reproduced by Édouard Piette in his work on "The Art Relating to the Reindeer Age,"[1] it would appear that a species of zebra had wandered northward, with other members of the African fauna, during the Pleistocene, at least as far as central France. On plate XXX. of Piette's work are reproduced two engraved figures of an animal that seem undoubtedly intended to represent a zebra. In one of these (Fig. 6) only the head and neck appear, while in the other (Fig. 7) almost the entire animal is drawn. The reference to these figures in the accompanying text is as follows:

FIG. 6. Engraving representing the head and neck of a horse-like animal with erect mane, delicately striped like the zebra. The stripes are formed by rows of points almost contiguous. One notices in the front of the head a series of marks like chevrons and under the neck, two short parallel stripes. Grotte des Espélungues, A'Arudy.

FIG. 7. Engraving representing an animal like a horse, delicately striped like a zebra, with erect mane, small head having small ears. The stripes are indicated by series of parallel lines or of points. The tail is incompletely drawn. Grotte de Tayngen.

The striping of the hind quarters in Fig. 7, suggests the "gridiron" pattern on the rump of the rock or berg zebra (*Equus zebra*), an existing species, now on the verge of extinction, but formerly abundant in the mountainous districts of Cape Colony. Here, however, the likeness ends, for the absence in the engraving of stripe marks on the limbs, the presence of which, clear down to the hoofs, is a character of the above species, would suggest Burchell's zebra (*Equus Burchelli*) as would also the small size of the ears.

A careful study of these drawings forces one to the conclusion, it seems to me, that a species of zebra was present in western Europe when paleolithic men were engraving the lineaments of reindeer, bison, horse, mammoth, cave bear, woolly rhinoceros and other animals of that strange and interesting time. Surely this ancient artist did not stretch his imagination to so accurately delineate the stripe pattern of a zebra, without having seen it. All of these paleolithic engravings depict an animal most faithfully, even, at times, to minute details. The familiar sight of some beast begat an impulse that found its expression in virile representations of form, remarkably accurate considering the rude and primitive implements for engraving, that were in the hands of these artists of the remote past.

I am not aware of any previous reference to the zebra's former existence in Europe, and I present the above facts simply as evidence coming from the hand of one who without doubt knew and drew some form of zebra that later, like so many other great mammals, vanished from the northern lands.

SPENCER TROTTER

SWARTHMORE COLLEGE, PA.,
February 14, 1911

[1] "L'Art Pendant L'Age Du Renne," Paris, 1907.

SCIENTIFIC BOOKS

Termitenleben auf Ceylon; Neue Studien zur Soziologie der Tiere, zugleich ein Kapitel Kolonialer Forstentomologie. Von KARL ESCHERICH. Jena, Gustav Fischer. 1911. Pp. xvii + 262. 68 text-figures; 3 pls.

This important contribution to our rapidly increasing knowledge of the termites, or "white ants," had its origin in a journey made by Professor Escherich during 1910 to Ceylon, and contains a very interesting account of the behavior of several of the species of that island. Four fungus-growing species (*Termes obscuriceps, redemanni* and *ceylonicus* and *Microtermes globicola*) are considered at length in the opening chapter of the work, their architecture and fungus-gardens being